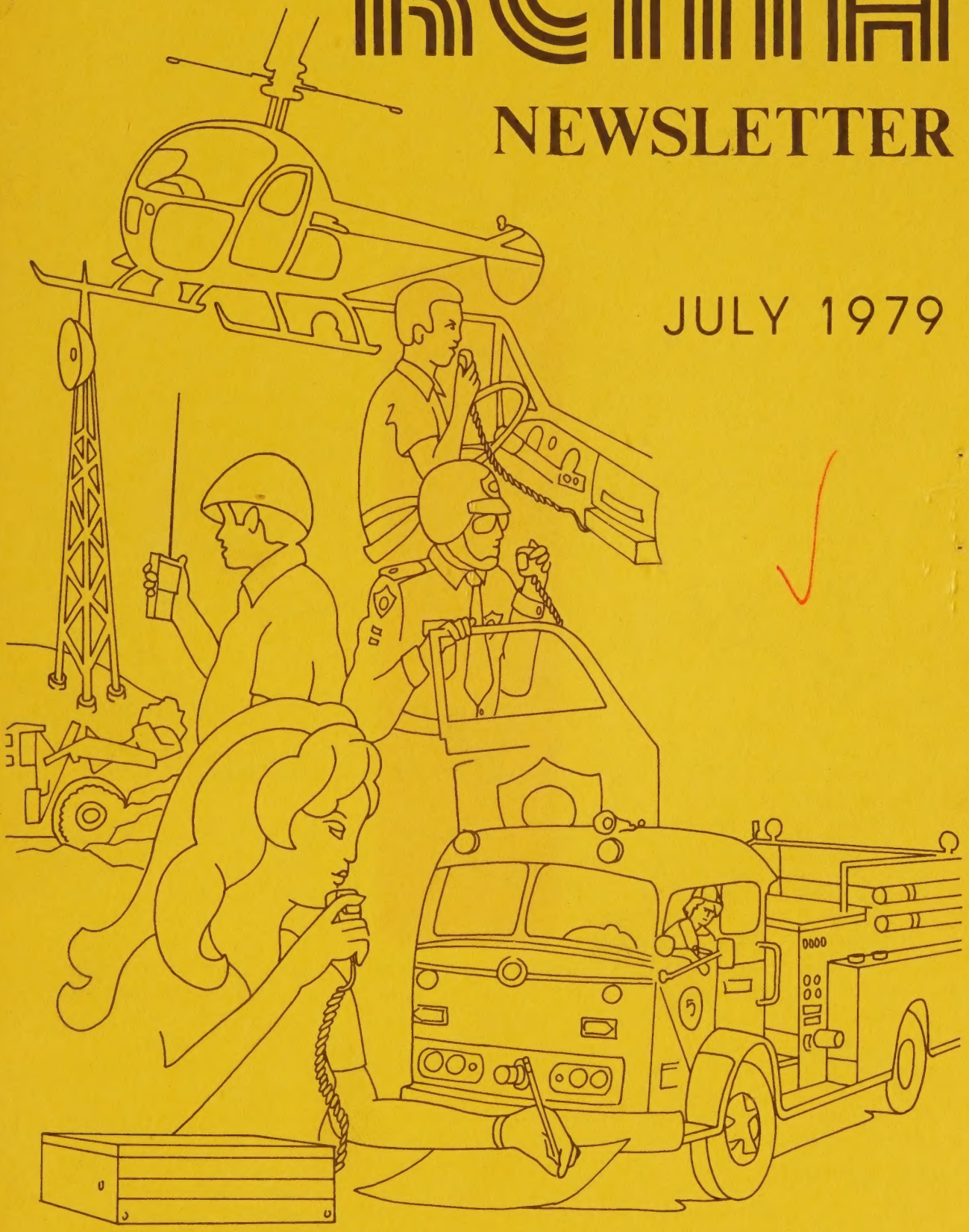
RCMA

NEWSLETTER

JULY 1979



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FOR YOUR INFORMATION

1. All club business, unless otherwise noted, must be addressed to: RCMA, P.O. Box 4563, Anaheim, CA 92803. This includes matters that relate to renewals, changes of address, Newsletter delivery problems, etc.
2. Input to the RCMA Newsletter must be mailed to the proper editors whose addresses are included in the column headings. If in doubt or if no particular column seems to be appropriate, send it to: RCMA, P.O. Box 4693, Riverside, CA 92514. Please do not include matters of club business.
3. RCMA Newsletter back issues (reprints) - For information and prices send a self-addressed, stamped envelope to: RCMA, P.O. Box 4693, Riverside, CA 92514.
4. To forward a letter to a specific RCMA member whose address you do not know, put your message to that person in a stamped envelope with your return address in the upper left corner. Put this and your instructions for remailing in another envelope and mail to: RCMA, P.O. Box 408, Earp, CA 92242.
5. It would be appreciated if you would include your RCMA membership number with all correspondence to the Newsletter Editors or to Headquarters.
6. If you require a reply when writing to RCMA Headquarters or one of the Editors you MUST include a self-addressed stamped envelope.
7. Please write only on one side of the paper.
8. Please do not combine in one letter items that should go to different addresses.
9. If you are inclined to type what you submit to the Newsletter, please use a 6-1/4 inch column width with 1-1/8 inch margins on each side and single space. Doing this may save an editor from having to retype the material. Please do not use "*script*" type.
10. Your RCMA membership number and expiration date appear on your Newsletter mailing label.

The RCMA Newsletter is published monthly by the members of the RADIO COMMUNICATIONS MONITORING ASSOCIATION, P.O. Box 4563, Anaheim, CA 92803. Subscription rate/membership fee is $8.00 per year for U.S. residents and $10.35 (U.S.) for persons in all other countries (dues subject to change).
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JULY 1979 ISSUE NO. 42

** Calendar **

MONTH DATE	DAY TIME	SCHEDULED	ORGANIZATION LOCATION
JULY 20	FRI. 8:00 PM	MONTHLY 3rd FRI.	RADIO COMMUNICATIONS MONITORING ASSN. MERCURY SAVINGS & LOAN VALLEY VIEW ST./LINCOLN AVE., BUENA PARK, CA

Ron Hamlet will describe GMRS (General Mobile Radio Service - formerly Class A-CB) which will include an equipment demonstration. There may also be a demonstration of "Select-a-Call".

AUG 1	SUN. 1:00 PM	MONTHLY 1st SUN.	RADIO COMMUNICATIONS MONITORING ASSN. SAN DIEGO CHAPTER, SKIP SANDERS' HOME 2129 CROWNHILL RD., SAN DIEGO, CA

AUG 17	FRI 8:00 PM	MONTHLY 3rd FRI.	RADIO COMMUNICATIONS MONITORING ASSN. MERCURY SAVINGS & LOAN VALLEY VIEW ST./LINCOLN AVE., BUENA PARK, CA

The guest speaker will be a representative for Electra.

SEP

Tentatively planning a program on Los Angeles County communications.

The Worldwide TV-FM DX Association (WTFDA), a fellow ANARC radio club, will hold its annual convention on August 3rd, 4th and 5th in Baltimore, Maryland. It will be held at Mueshaws Hilltop Inn at the Security Blvd. exit to Interstate 695. Preregistration is desirable. Contact: Don Blevins, 1715 Earhart Rd., Baltimore, MD 21221, (301)-574-2714. Among several guest speakers will be John Pilger, RCMA's Frequencies and Radio Systems column editor, speaking on the subject of paramedic radio systems.

The International Radio Club of America (IRCA), another fellow ANARC radio club, will hold its annual convention on August 24th, 25th and 26th in Peoria, Illinois. For information and/or reservations send a self-addressed, stamped envelope for reply to: John Clemmer, 2937 West Gilbert, Peoria, IL 61604. IRCA members specialize in the reception of distant stations in the 540-1600 KHz mediumwave AM broadcast band.

Reports of Meetings and Officers

SOME TOPICS FROM THE MAY 22, 1979, RCMA BOARD OF DIRECTORS MEETING

For formal and detailed minutes send a business size SASE and an extra 15¢ stamp (to help cover photocopy costs) to RCMA, P.O. Box 4563, Anaheim, CA 92803.

Old business:

1. A discussion of the proposed Bylaws was held, and it was agreed to hold a special meeting, at a later date, to draw up the Bylaws, Constitution and Incorporation papers, which will then be presented to the membership for approval.
2. The Board unanimously approved that membership printouts will not be released to anyone, except Board members, without the prior approval of the Board. Members wishing to contact another member are requested to read item 4 of the "For Your Information", which is printed monthly on the inside, front cover of the "Newsletter".
3. The Board approved the request of the 2nd Vice President, to allow RCMA Regional Editors to compile membership directories for the states in their region, for the benefit of the members who live in those states. (Editor's note: It was decided at the June 19 Board meeting that Karl Pagel, after revolunteering his services, would resume work

Reports of Meetings and Officers (continued)

on the membership directory which will appear in installments in the Newsletter and contain members through May 1979.)

New business:

1. The Board unanimously approved RCMA joining "The Personal Communications Foundation", as a Full Member. The cost will be $25.00. A resume of the goals of this organization will be published in a future issue of the "Newsletter".
2. Approved certain changes in the "Goals" of RCMA, and authorized the reprinting of the club "Information Letter" and the "Membership Application".
3. The 1st Vice President submitted a sample of a different style of lettering, which will appear as the "Logo" on the July issue of the "Newsletter". The members will be asked for comments on the style of lettering they prefer. After a decision is made on the style, it will be used on all RCMA forms.
4. The 2nd Vice President read a letter from Mr. Robert Grove, a member of RCMA, advising us that starting in September 1979, he will be one of the Editors of C.B. Magazine. In addition to his many other activities, Mr. Grove is the Editor of our "Military" and "Federal Government" columns.
5. The Secretary reported that during the past month we have received an additional 119 requests for information about RCMA. These requests came from 31 states, Canada, and one each from Japan, United Kingdom and Iceland, and 6 were from women. 87% came from outside California.

SOME ITEMS OF INTEREST FROM THE JUNE 15, 1979 RCMA GENERAL MEMBERSHIP MEETING IN ORANGE COUNTY, CA

1. The President reported on the progress of the Bylaws, Constitution and Incorporation papers. He and the 2nd Vice President indicated that the proposed form of each should be ready within four months.
2. The 2nd Vice President and Editor reported on several new editors for our "Newsletter". Several suggestions for additional items in the "Newsletter" were given by some of the members present.
3. The 2nd Vice President gave the Treasurer's report, which will be published in the July "Newsletter".
4. A brief summary of the May 22, 1979 Board of Director's meeting was given by the Secretary. He also introduced six (6) new members who were present.
5. The 1st Vice President reported on upcoming guest speakers during the next few months. He also reported that the Board had voted to join "The Personal Communications Foundation".
6. The 1st Vice President listed several new models of scanners that are being brought out by Bearcat during the next few months.
7. Bob Leef, 1st Vice President, then introduced Mr. Jerry Duro, Regency Representative, who demonstrated the new model "Touch K500", which will be released during July of 1979. The talk and demonstration by Mr. Duro was very interesting, and well received by the members.
8. The President asked the members what they would like in the form of programs, speakers and tours. Some of the suggestions from the members included: speakers from major scanner companies, a speaker from the Los Angeles County Department of Communications, tours of L.A. County S.R.C., L.A.P.D. airport (helicopter), San Diego P.D. facilities, local railroad dispatch centers, the Los Angeles ARTCC (FAA radar facility) and either a tour of some California Highway Patrol facilities (possibly including a CHP helicopter) or a guest speaker from the CHP.
9. A drawing was held for a "Worldwide Listeners Guide To The Radio Spectrum", which was donated to us by "Radio Publication Company". The winner was James Bainbridge (CA-OR-080).

The meeting was adjourned by the President at 9:55 P.M.

"IL-1979" RCMA GATHERING HELD ON JUNE 2, 1979, IN OSWEGO, IL

The following members were in attendance: Steve Handler (IL-001), Dave McLaren (IL-002), Ed Sirovy (IL-004), Ron Grzesik (IL-006), Ron Smithberg (IL-009), John Coker (IL-010), John Arendt (IL-012), Vic Somner (IL-015) (and fiancee), and Bill Blomgren (IL-020).

Although the time of the gathering was tentatively set for 1200-1800 CDT, the first member arrived at 1000 CDT and the last member departed at approximately 2030 CDT.

No attempt was made to form an IL chapter as such, but hopefully another informal session could be scheduled after the summer months have passed - probably after Labor Day. Hopefully some of the members in the northern IN and southern WI areas may also want to attend a future session to swap ideas, frequencies, etc. Correspondence between members was encouraged - especially in some of the "sensitive" federal areas where public disclosure is not in the best interest.

As the "host" for this gathering, some acknowledgements are in order:

1. To the folks out at RCMA headquarters - especially Iden Rogers and Karl Pagel who went along with the idea and did the necessary "leg work" and forwarding of correspondence.
2. To Dave McLaren - who brought along his specialized radio equipment and demonstrated same.
3. To Ron Smithberg, Bill Blomgren, and John Coker - who brought refreshments. John and Bill brought a wealth of useful information along and were most enlightening in the federal areas.
4. To all those in attendance that donated for the broasted chicken from Foxy's Burger Bar in downtown Oswego.
5. To my wife and son - who were able to be without "Daddy" for a day.

It was a pleasure to host this first informal gathering and to meet other club members. I'm looking forward to being present at any future gatherings.

Respectfully submitted, JOHN ARENDT (IL-012)

SUMMARY OF TREASURER'S REPORT
For Period Ending June 15, 1979

Balance in account at time of transfer of books to new Treasurer (according to previous Treasurer)			$ 222.47
Received for membership:			
New members (51)	$ 403.00		
Renewals (39)	312.00		
Other received	35.00		+ 750.00
			$ 972.47
Expenses:			
June Newsletter (printing,postage,etc.)		$ 388.08	
Info sheets & applications (printing)		37.68	
Other:		18.25	- 444.01
			$ 528.46

For a detailed report send a self-addressed stamped envelope and one extra First Class postage stamp to: RCMA, P.O. Box 4693, Riverside, CA 92514

Members who live in or around Anaheim who would like to get together for interesting conversation while preparing the Newsletter for mailing after it comes back from the printer, please contact Jerry at 772-1259. Any assistance would be appreciated.

THE editor's column

Iden Rogers, P.O. Box 4693, Riverside, CA 92514

Letter from GENE HUGHES (CA-LA-006):

Dear Friends:

First, I want to thank you all for having me as a guest speaker at the April 20 meeting. It was truly an honor and a pleasure. I'm sorry that I could not remain for the entire meeting, but as I explained, a waitress had poured an entire glass of iced tea on me and I was really "all wet."

I would like to offer a correction to the May Newsletter (Page 1 recap of the meeting: The paramedic unit which I brought to the meeting is manufactured by Epic Manufacuring Co. of Chicago, Ill., not General Electric. GE does supply the RF portion of the unit.

Some answers and clarification to items in the May newsletter:
1. LAFD (Page 15) is not using channels in the 30 Mhz. band
2. Disneyland does not use 162.02 (Page 15).
3. Walter Spencer, who published "Scanner Mate," told our computer people at the APCO meeting that "Scanner Mate" was no longer being published.
4. LAPD is using 506.7375 (Central Div.), 506.9375 (Newton Div) which is a change, 507.2625 (simplex and repeater for tactical), and 507.0875 (emergency "trigger").

Here are some corrections to POLICE CALL, so members of RCMA will not have to mail in for them:

In several places, it should be California Department of Forestry (not Division).

The following LACoFD stations are closed: #2, #13, #32, and #104. #58 is in Ladera Heights, #78 in Lake Hughes, #83 in Rancho Palos Verdes. LACoFD is also using 470.4125, -.4875, -.5125, -.5875 and -.6625 for unit-to-unit communications.

LAFD is using 33.82 for S.F. Valley dispatch.

Palos Verdes Estates is considering breaking away from the South Bay program.

Placentia and Tustin receive fire protection from Orange County FD.

San Bernardino County SO, Yucaipa Station, identifies as "Yucaipa." All systems in that county have CLEMARS as F-3. We erred in listing 154.845 as a car-to-car channel for the SBSO.

On page 35, in the right-hand column, the second "42.42" should be 42.44. Page 37, 154.815 should be "Mission Viejo." And, on page 40, it's 470.3625.

Sincerely,

Gene Hughes

PUBLISHERS OF: POLICE CALL — FIRE/EMERGENCY RADIO MONITOR HANDBOOK
PUBLIC SAFETY 2-WAY RADIO DATA

THE editor's column (continued)

INQUIRY FROM JAPAN:

Dear sir,

I am so happy to send this letter and am now much interested in your club activities, which are world-wide famous, unique and active. We, Japanese cannot find such a club as yours in Japan.
As I am a regular contributor for the column of a monthly radio magazine, I intend to introduce your club to my many readers.
So please let me know your detailed activities. I want to know more about your history and present status.
Of course, a sample copy of your club bulletin will be highly appreciated.
My postal address and name is mentioned below:

Minoru Noguchi
1026 Fukaya-cho, Fukaya-city,
Saitama, 366 Japan

Enclosed you will find 2 International Reply Coupons to cover the return postage.
I am looking forward to hearing from you soon and send you all good wishes. Good listening!

Yours sincerely,

M. Noguchi

Minoru Noguchi

(Editor's comment: Persons in other continents are certainly welcome to join RCMA but the extra expense for postage may have been a deterrent for many. Our dues outside North America have been $18.00 per year.

I am certain that North American RCMA members would be most interested to learn about the radio systems, frequency bands and the monitoring hobby in other distant, industrialized nations. I, for one, hope Mr. Noguchi chooses to join RCMA and that he becomes a regular contributor to the RCMA Newsletter.

Mr. Noguchi's letter brought an issue to the surface which was addressed at the June 19th Board meeting. In order to encourage persons in other continents to join RCMA, the Board members decided to reduce the annual dues charged to persons on other continents even though we may lose a few dollars per foreign member. The benefit to RCMA, hopefully, will be interesting input to the Newsletter from these persons. Dues charged to all persons outside the U.S. are now $10.35 (U.S.) per year.)

The Board discussed printing photos in the Newsletter. This is something we do want to do but it costs money. Our Newsletter is growing and expenses are increasing. When we can, we will print pictures. It should start to happen sometime this year.

THE editor's column (continued)

NEW COLUMNS FOR THE RCMA NEWSLETTER

"FCC TOPICS" EDITOR NEEDED!

The editor for such a column would be one who has some familiarity with the FCC Rules and Regulations that pertain to "our" frequencies. He must have FCC R & R Volume 5 which contains Parts 87 (Aviation Radio Services), 89 (Public Safety Radio Services), 91 (Industrial Radio Services), 93 (Land Transportation Radio Services) and 94 (Private Operation-Fixed Microwave Service). On a monthly basis he would pick some portion from the FCC R & R and write it up with any necessary explanatory comments. The editor would write up any FCC news or rulings of which he is aware that relate to our frequencies. It would be desirable if he were a subscriber to publications which present FCC news but the editor could draw or draw in addition from member input. The editor would also write up questions sent in by members and supply answers when possible and when not possible the questions would be printed in hopes that a member would send in the answers. (Persons interested in FCC matters, please see the first item in the "CONTACT" column.)

"VHF MARINE" EDITOR NEEDED!

The editor for a Marine column would, when possible, write articles on VHF marine communications and receive input including frequency/use information from members in areas where these frequencies are in use and incorporate it into a monthly column. The editor should be an active VHF marine frequencies listener. This column probably would include the U.S. Coast Guard which would then be removed from the "Military" column. The column would also carry questions and answers.

"TRAINS" or "RAILROADS" EDITOR NEEDED!

The editor for this column must be an active railroad frequencies listener and be familiar with railroad terminology and jargon. He would, when possible, write articles relating to railroad communications listening and, of course, prepare material sent in by members for a monthly column.

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Members who think they might want to edit any of the above proposed columns should write to the Newsletter (P.O. Box 4693, Riverside, CA 92514). Please state some facts about yourself and your monitoring background, and please supply a typing sample. Thanks!

ON EDITING: I received a complaint letter because I edited out parts of some material that was sent to me by a particular member.

One of the jobs of an editor is to edit as he feels necessary, for whatever the reason, but when I, the Editor, and the member don't agree on how I edit that member's material, then there is a problem.

There may be a way to avoid such problems in the future. When members send material (especially letters to the editor) to me or other RCMA editors it might be helpful to state "print all or none". In a case where the editor considers only some of the material to be appropriate and of value but the member puts "print all or none", the editor can return it to the member explaining why he would like to edit out certain parts and for what reasons. The member in turn can modify it or not resubmit it.

THE editor's column (continued)

EXCITING NEWS FROM "CB MAGAZINE"

CB Magazine, long recognized as a leading CB radio publication, has just announced a radical departure in format. Henceforth, they will be oriented toward all phases of hobby radio, including shortwave listening, scanner monitoring, and ham radio.

Bob Grove (NC-006), editor of the RCMA "Military" and "Federal Gov't" columns, has been selected to appear monthly on their mastheads as shortwave editor.

Gordon West, Managing Editor of "CB Magazine", informs me that they plan to include an "RCMA" section in "CB Magazine" which should begin with the September issue. Selected articles of interest from the RCMA Newsletter will be printed in "CB Magazine" on a monthly basis and with full credit given to RCMA.

If all goes as planned, Gordon West will have numerous copies of the September issue,with RCMA represented in it, available at the July Orange Co. meeting. Members who live in other parts of the country should keep an eye out for "CB Magazine" starting with the September issue.

TOM (PA-003) has had a bad experience with CRB, a publisher of frequency lists. Tom ordered the "AERO-1" frequency list only to discover that it, "is obsolete and identical to the one I received over 5 years ago." (I believe their frequency list numbers advance one for each succeeding list. If they ever revise their AERO list it probably will change to "AERO-2". Also, many of their lists use Roman numerals to indicate the year of publication. When the Roman numberals are deciphered one often learns that the list is rather old.)

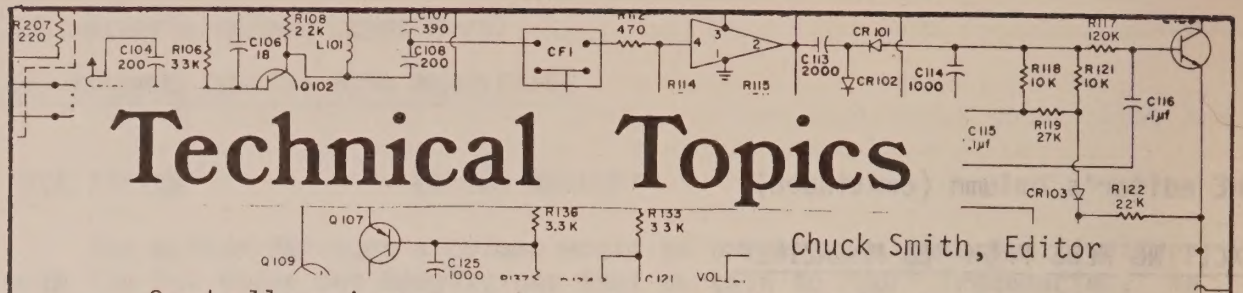
Tom, feeling that he had a legitimate complaint, returned the list and asked for his $3.30 back. After not hearing from them and without his AERO-1 list or his money, he complained to them again and mentioned, among other things, his membership in RCMA and that other members might be inclined not to deal with CRB if they knew. (Tom, you are certainly not the first one.) This time he received the following reply:

> "Sir: Publications are not and have never been offered on a returnable basis. These terms of purchase are very clearly indicated in our literature which is sent to all persons requesting a catalogue. Persons not wishing to accept these terms are free to refrain from ordering. We are unfamiliar with the group which you mention belonging to and are unable to assess the loss to us should we not have their support, nor can we evaluate the possible impression its members will have regarding another member who could not understand the simple terms of purchase in our catalog. Nevertheless, we are unable to change these terms, despite your attempt to blackmail us into doing so.
>
> Sincerely,
> (signed)
> Robin L. Smith"

Tom asks how he "can deal with these weird people." One approach in dealing with them would be --- not to deal with them.

Anyway, for an up-to-date VHF Aircraft frequency list, it would be very hard to beat the "AIRPORT/FACILITY DIRECTORY" published by the National Ocean Survey. Write to National Ocean Survey, Distribution Division C-44, Riverdale, MD 20840, and ask for a catalog offering the AIRPORT/FACILITY DIRECTORY by subscription and by single issue.

(continued on page 35)



Technical Topics

Chuck Smith, Editor

Send all equipment reviews, technical articles, technical tips and questions on such subjects as receivers, antennas, preamps, accessory equipment, repeaters, links, tones, scramblers, non-voice data transmissions or even computer applications for monitoring to: Chuck Smith, 4901 Heil Ave., #3C, Huntington Beach, CA 92649.

Greetings to everyone again, and welcome to this installment of the Technical Topics column. Well, we're into the month of June already, and this means the coming of summer and with it warmer weather and for some of us, more instances of frequency propagation phenomena at the VHF frequencies. While I'm sure the Low-Band Skip Editor will cover some of this ground in the months ahead, I would like to briefly discuss something just a little different, and that is tropospheric propagation at VHF and UHF frequencies.

Signals in the VHF/UHF spectrum can occasionally be received at distances considerably beyond the horizon. When this happens, it is usually the result of reflection from the ionosphere or refraction in the troposphere. While ionospheric propagation is the most common source of "skip" at VHF frequencies, you should not overlook the existence of "tropo" and learn what causes it.

Skip as we usually use the term is caused by highly ionized layers in the upper atmosphere, which, under the influence of ultraviolet radiation from the sun, acts like a mirror for radio waves. The more intense the state of ionization the higher the frequencies which will be bent enough to return to earth at some distant point. For this reason, ionospheric propagation is forever linked to the sun, and for the most part is more likely to occur in areas of daylight than areas of darkness. This is not the case with tropospheric bending, however, as I shall explain in a moment. Before I go into some of the details, however, I think I should stress that my discussion is centered around tropospheric bending, as opposed to tropospheric "scatter", which is a different type of phenomenon commonly used the transmit radar frequencies effectively beyond the horizon with excellent reliability.

Tropospheric bending is an effect which, under certain circumstances, will cause radio signals to be returned to earth at distances far beyond the normal radio horizon. It is a phenomenon which has been predicted in some parts of the world with amazing regularity by meteorologists. Radio waves can be bent whenever they pass from an area with one refractive index into an area with a differing refractive index, much the same as light is bent as it passes from air into water or vice versa. One of the factors which affects the refractive index of our atmosphere is its temperature. Others are the amount of moisture in the air, the barometric pressure, and so on. Normally, as we climb upwards from the earth through our atmosphere, the rate of change of pressure is relatively constant. However, if we for some reason were to encounter a sudden, sharp change in the pressure, either a drop or a rise, there would be a break in the refractive index of the atmosphere at that point, and under the correct set of circumstances, this could cause enough bending of a radio signal to keep it close to the earth rather than allowing it to escape into space. This is the effect we refer to as tropospheric bending, and accounts for the vast majority of over the horizon propagation above 150 MHZ.

Signals transmitted via tropospheric bending are usually much weaker than those which arrive via the ionosphere, because the bending process in the troposphere is much less efficient than that occurring in the upper atmosphere. Therefore, better receivers with lower noise figures are required to distinguish these tiny signals from the garbage covering them. Directional antennas are practically mandatory for the enthusiast interested in this area of high-frequency communications, and as the signals travel over the terrain on their way to their distant destination, they have a tendency to have their polarization rotated, so that most signals arriving by this method have become horizontally polarized, regardless of how they started out. Many VHF/UHF nuts who want the best of both worlds use antennas with circular polarization, which has the qualities of both horizontal and vertical, and is only a few DB worse than matched polarizations at both ends of the signal path.

Long-distance reception due to tropospheric bending is more apt to occur in the early evening, as the upper layers of the atmosphere are cooling down and the lower ones are still kept warm by the earth below. It may last for anywhere from a few minutes to a few hours; in fact I was able to work Hawaii a couple of years ago on 2-meters (144 MHZ) using just 10 watts of power, utilizing a tropospheric duct that lasted for almost six hours before it disappeared. This type of event is rare, however.

This discussion was motivated by a member's question relating to how much tropospheric propagation he could expect to hear, and I hope I have helped to clear up some of the mystery which surrounds this mode of radio propagation. While most members are not particularly interested in receiving distant stations regularly, it does help to understand why these things occasionally happen.

From RON (CA-LA-060):

Will the helical filter mentioned in previous RCMA Newsletters somewhat eliminate interference such as two stations transmitting at once and creating a signal that passes through my front end completely wiping out all VHF-Hi Band radio traffic?

What happens is this---When the repeater is being used on 147.900 MHz (2 meter ham) and the paging system on 158.700 is transmitting at the same time, I cannot listen to the high band because these signals pass through to the speaker. I must be fairly close to one of the xmtrs because it really booms in. One thing is very interesting: 158.700-147.900=10.8 MHz. Is this why the signal passes through? What do you suggest to help the situation?

Reply from IDEN (CA-RI-001):

After digesting the "What Are Images?" article in the May 1979 Newsletter, it will be easier to understand the cause of the type of interference you mention.

Normal reception results when a desired signal and the receiver oscillator are separated in frequency by an amount equal to the i.f. frequency of the receiver. Image reception results when an undesired signal is separated in freqeuncy from the oscillator by an amount equal to the i.f. frequency (like normal reception) but is on the opposite side of the oscillator frequency from the desired frequency.

The type of interference you describe is related. Instead of the receiver oscillator mixing with a desired or undesired frequency to produce a difference frequency equal to the i.f. frequency, two undesired signals are mixing together in the receiver which produces a difference frequency equal to the i.f. frequency which the i.f. amplifier happily passes. Your observation was correct.

One solution would be to use a receiver having a different i.f. frequency. Chuck will respond to the filter part of your question.

A notorious offender in western Riverside and San Bernardino Counties is the two station mix of the Riverside County Sheriff on 158.85 and the Civil Air Patrol repeater on 148.15. The difference between the two is 10.7 MHz. Both are strong, both talk frequently and when both happen to be on at the same time a 10.7 difference is produced and the audio of both stations comes out on any high band channel on many receivers with an i.f. frequency of 10.7. On a BC-101 with an i.f. frequency of 10.8 and on the BC-250 with an i.f. frequency of 10.85, this particular combination of stations of course causes no problem.

Again, this type of interference is characterized by receiving two stations at once neither of which is on the frequency you are listening to. It will come in on many receiver channels and will randomly come and go in the middle of conversations.

In response to the question from RON (CA-LA-060) regarding the effectiveness of a helical filter against intermodulation, I must first complement Iden on his excellent discussion of the exact reason for the problem. The helical filter--or any good method of applying RF selectivity--will do wonders when it comes to cleaning up your problems with intermod. However, do not lose sight of the fact that the helical filter is effective against intermod because it blocks out one of the interfering signals. In other words, to use the example given in the question, if the helical filter is adjusted so that the signal on 148.15 MHZ is rejected, then there will be no problem with intermod as described; however, you have just given up the opportunity of receiving 148.15 MHZ, since the filter has been adjusted so that it is blocked. This is the same reason why the older crystal-controlled scanners had to be tuned up for the segement of the band that you were interested in. When Bearcat invented and patented the "track-tuning" method of using the same front end across the entire band, this made the problems with intermod a little bit worse because the track-tuned front ends were not as finely tuned as the ones which were dedicated to one segment of the band. The real culprit, as I have discussed in the past, is the RF amplifier design. Instead of just amplifying the two signals, the RF amplifier has become nonlinear and is now acting like a mixer, which in addition to the two original frequencies will also generate the sum and the difference. If the amplifier kept acting like an amplifier instead of moonlighting as a mixer, you'd never have any problem with intermod. The helical filter will work, RON, but use it as a last resort, because it will eliminate large areas of the band from consideration.

In last month's column I made a remark to the effect that I wanted those of you who wrote letters to the manufacturers of a scanner to send a copy of that letter to me. I do not want to rescind that statement, but I would like to clarify it a bit. Since that time I have received a copy of a letter written by an irate member to the manufacturer of his scanner, which gave in some detail, exactly what had happened to the scanner, how many times it had been back to the factory, and, I might add, exactly what the member thought about the ancestral background of the person to whom the letter was addressed. While there is no doubt in my mind that some people are not going to be satisfied with the treatment they receive from a manufacturer's customer service department, I think it only fair to mention that very little gets said about the good things that they do. While I am not going to take up the cause in the defense of these companies, I think it's only fair that the consumer have a little awareness of the mon-

umental task facing the repair departments of these organizations, and since companies are, after all, made up of people just like you and me, there will occasionally be mistakes or oversights. The only time that the RCMA as an organization, or myself as an individual, should even consider getting involved in one of these disputes is when it is blantantly obvious that something out of the ordinary has happened. Therefore, I am not asking for your letters so that I may act as some sort of Ralph Nader for the scanner radio industry; all I want is to be kept abreast of the types of problems that you are having with these radios, so that if I see a trend or something common happening, I can write and inform the manufacturer of this fact. Many times the repair facilities do not keep complete records and a trend of this type may be overlooked. I ask the cooperation and understanding of all members in this regard.

From TONY (NJ-005):

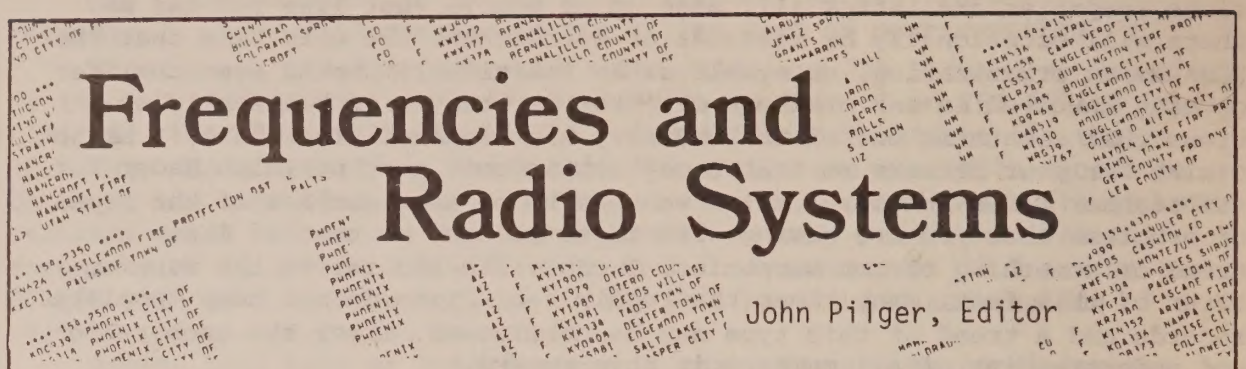
I'm interested in utilizing tone-coded squelch in conjunction with monitor receivers. Any thoughts? Perhaps Bearcat will come out with a receiver that you could keyboard enter any one of the 32 EIA tone codes on a programmed frequency. It would help a lot for those of us who listen to business band or GMRS activity. Would reduce channel activity in some cases by 90%.

TONY, this is an interesting suggestion, and one that can be quite easily implemented by the scanner listener who is interested in this type of selective calling technique. While the need is probably not great enough to make a manufacturer interested in providing such a feature in the radio, it would be a simple task to buy (or build, if you're able and so inclined) one of the tone-code decoders that are available on the market and advertised in such amateur radio publications as Ham Radio and 73. These decoders are physically very small, come in both single and multiple tone versions, and connect up quite easily to almost any type of receiver.

Many thanks to you, TONY, for the many bits of information and other contributions that you have sent to me recently. I appreciate it all very much and I will do my best to answer all of your questions as soon as I can. Keep up the good work!

Relative to some upcoming topics that I plan to deal with in the near future....BILL (IN-004) has sent me a very well written, complete article on the construction of an 800-MHZ converter. I will reproduce this piece of information in its entirety in the next issue or so, but would like to thank BILL in advance for the work he did in putting it together. I have also received quite a bit of interesting information from the membership pertaining to data communications and the methods being employed to safeguard this information from reception by others than the intended party. Some response has come in regarding my question about using a home computer to decode the ASCII transmissions being used for teleprinter communications, and at the rate things are going, I wouldn't be at all surprised if someone didn't solve that little problem in the very near future.

As I close for this month, I would like to thank all of you who have written with comments and tidbits of information, and I would like to hear from each and every one of you with your questions and your contributions. Without suggestions from you, my poor brain would run out of ideas in a hurry, and some of your questions wind up being the source for some good articles of interest to everyone in the club. The new look of the Newsletter is very encouraging to me, and I want to do my best to fill its pages with information that you all can use. So long for now, and we'll be seeing you next month.



Frequencies and Radio Systems

John Pilger, Editor

This column is for reporting two-way communications frequencies above 30 MHz EXCEPT those belonging in special interest columns such as Aircraft, Low Band Skip, Military, Federal Gov't., Satellites, etc. Members are also encouraged to submit info about radio codes, dispatch areas, unit numbering systems, overall radio system details, repeater locations, point-to-point links, newspaper and magazine clippings and questions consistent with the subject matter of the column.

Our new reporting system on Frequencies and Radio Systems (F&RS for short) seems to be working well. We have some new regional editors, as you can see by the column headings. Most important, however, is that the RCMA membership is sending information directly to their regional editors for publication.

I would like to take just a moment to dwell on the subject of contributions of material. Each of the regional editors are volunteers: there certainly is no pay involved, and there are frequently some expenses. Each of the editors depends upon the RCMA members to help out to make the column work. Just as important as contributing F&RS data, however, is asking the editors questions about their areas. Most of the editors have extensive personal frequency lists which they will gladly share in the pages of the Newsletter; they must first know what <u>you</u>, the Newsletter reader, wants to see.

We who write the F&RS columns are currently experimenting with possible changes in the frequency/system reporting forms. Since there seems to be some interest in developing a format which is both easily understood and easily entered into a mini-computer, Bryan (CA-OR-097) has developed a prototype listing which may accomplish both requirements. As soon as it is reviewed thoroughly by the F&RS editors, we will ask for your comments.

As you will see by this month's F&RS column, we still have some vacancies in the regional editor structure. If any of you are interested, drop me a note and I'll explain the system. I can be reached at P.O. Box 109, Fort Meade, MD 20755, or at (301) 621-9544.

CT MA ME NH NY RI VT

Richard Barnett, Regional Editor
P.O. Box 428, Newton Highlands, MA 02161

Richard will probably begin his regional column in the August Newsletter.

DE MD NJ PA

Chuck Gysi, Regional Editor
P.O.Box 216, Willow Grove, PA 19090

Chuck will probably begin his regional column in the August Newsletter.

MI OH

Larry A. Smith, Regional Editor
1223 Vinsetta Blvd., Royal Oak, MI 48067
(313) 398-9797 7-11 PM EST & Weekends

To help break the ice, let me introduce myself as the Michigan/Ohio Regional Editor. I am Larry Smith, single, and approaching 36 years of age. I live in Royal Oak which is a few miles north of the Detroit city limits. I work in a Royal Oaks hardware store.

On weekends I try to get up to our cottage to the north on Saginaw Bay which is southern Lake Huron. There I listen to VHF marine band and VHF aircraft during the warmer months, and Road Commissions during the winter.

Back home, I enjoy listening to a huge variety things. My equipment consists of: A Regency Whammo-10 with two digital selectors; a Regency Touch; a Regency Flight Scan; a Fanon VHF hi/lo pocket scanner; a Regency ACTR-10H/L/U scanner and a Panasonic RF-2800 shortwave receiver.

My interest in radio monitoring started in 1955 when my dad gave me a shortwave receiver. Most of the popular listening at that time was broadcast and marine radio. SSB was not in wide use which was good, since most receivers were not equipped to receive SSB.

In the mid 1970's my interests expanded to learning what was happening in my part of the state. I soon grew tired of hearing the usual family fight and barking dog calls on the police radio, and wanted to learn more of what was happening in the city. While driving to work one day, I noticed a few vehicles with vhf and uhf antennae and wondered what they were up to. I called their companies to inquire, and was told @%#*$ and hung up on. A few companies were more than happy to give the information, but it was darn difficult to get it. There had to be an <u>easier</u> way to <u>learn</u> what was to be heard on the scanner.

In the summer of 1976 I wrote to a number of radio manufacturers asking if they knew of a club or group of scanner owners who traded information on what to listen to. Only one company responded - Regency Electronics.

From Regency, I received a copy of an article sent in by one of the members hoping to attract new members. Writing to the club, I heard from Iden Rogers. After further correspondence I did join RCMA, becoming Michigan's first member.

For over a year I have carried on tape cassette correspondence with other RCMA members. Lately, due to work pressures, I have been unable to keep this up. With a change in my work schedule, however, I hope to again pick up the exchange of tapes.

F & RS - MI,OH (continued)

As for frequencies, I have many in Michigan and some from Ohio. I would be happy to answer any questions anyone might have regarding this area, especially if anyone is planning a trip here.

From LARRY: (MI-001)-Regional Editor

MICHIGAN, Miscellaneous

SP	Michigan		B 42.58
"	"		M 42.74
UTIL	"	Consumers Power Co.	B 48.02
"	"	"	M 47.94
ZOO	Detroit	Detroit Zoo	R 151.205
MFG	Warren	G.M. Research	B/M153.05
PD	Royal Oak		155.01
SP	Michigan	Undercover units	155.505
RR		Ferndale yard	R 160.53
"		Grand Trunk	160.59
"	Detroit	Yardmaster	161.07
"		Conrail - admin chan.	161.13

*****Questions and contributions should always be sent to the Regional Editor covering the locality in question.*****

IA IL IN KS KY MN MO NB ND SD WI

Mike Redman, Regional Editor
P.O. Box 1177, St. Charles, MO 63301

Well, here's my second month of editing for this region. I've been getting to meet a lot of really nice members through the mails in correspondence relating to the column. First, let me disclaim responsibility for the contributions attributed to me in the May 'Federal Government' Column. Those were most interesting frequencies, but they didn't come from me. I would like to have the author of them contact me, for I am interested in finding out more about them, particularly the Weather Bureau and Emergency Broadcast Service channels. I've gotten some very nice letters from LUTHER (MO-001). It seems that Luther is World War II Veteran who spends a lot of time monitoring, but of late has had some difficulty with local scrambled transmissions. I'm sure he would appreciate hearing from any of you who could help him out, or who would just like to write and talk radio. He's monitoring on a Tennelec. If you haven't sent in a contribution for a while, I'd like to hear from you. For upcoming stories, I'd particularly like to receive information on Statewide EMS systems, the 'MARCER' EMS system in Kansas City, the 'MERCI' system in Illinois, and similar systems in other states, along with the regular great contributions I've been receiving. Thanks to all of you for helping make this a really fine column!

From MICHAEL (CA-OR-005): Kansas City, Missouri, Police Department is experimenting with a new system of transferring a call from the complaint-taker to the dispatcher. The person answering the phone writes or 'inscribes' a three-digit code

(used in-house only) and the location on a roll of thin metallic 'paper' as it passes over a sensing/transmission unit. The same message then appears on a receiving unit at the proper dispatcher for the area selected by a switch at the complaint-taker's console (based upon his/her knowledge of the city. This method is not new to Public Safety (especially Fire) but is a first for KCMO PD. This is in conjunction with the recent (past year) move to plain language in lieu of radio codes on the air to 'streamline' Kansas City's operations. [Ed. note: St. Louis City Police uses a somewhat similar item. It's called an 'Electrowriter' and as the radio clerk is taking information, it's being printed in his/her handwriting immediately at the dispatcher's desk. These otherwise 'preprinted' tickets become 'radio tickets' and a permanent record of the call. The dispatcher then adds appropriate time-stamps and radio designator units as needed. Perhaps someone can provide us with Kansas City's frequency usage.]

From JOHN (IL-012): Here is a newspaper clipping taken from the April 11 Chicago Tribune concerning the Chicago Fire Department. Although it's a 'gossip' column, the columnist departed from her usual format to provide an interview with the Chicago Fire Commissioner:

> An interview with Richard Albrecht, the fire commissioner, revealed the following facts: Engine Company 25 near the Fire Academy is being remodeled into a new Communications Center. Current facilities are located at 61st and Wentworth and in City Hall, but by the end of the year, all will be combined in the new facility. This will be the first major city with a new computerized dispatch system. It will enable the operator to immediately locate the closest fire station to a fire. The system has been issued the first five licenses in the 800 Mhz. band which will eliminate the 'zone' concept, and keep things 'localized'. Microwave will be used, with 3 200 foot towers being built north, at the Academy, & the Roseland Pumping Station. Through the new computer system, data that can be accessed and given to responding units includes type of building construction, contents, entry points, and water department information. Completion date is yet unknown.

[Ed. note: Can someone supply us with these new 800 Mhz. frequencies and their use, and how long will it be before the manufacturers begin producing 800 Mhz. receivers?]

The Chicago Transit Authority

From ED (IL-004): The Chicago Transit Authority operates 1100 rapid transit cars, 2700 buses, and several hundred service and supervisory units. Twenty-five radio channels are used in three radio nets to control this fleet.

Radio is nothing new to Chicago Transit (CTA). The January 1944 issue of 'Electronics'(McGraw Hill) describes the Chicago Surface Lines (one of the predecessor lines) supervisory and service vehicle net.

A 250 watt transmitter on 39.860 Mhz. fed a 267 foot tower at Madison and Austin to 44 mobile units (simplex). Mobile output was 30 watts using FM equipment by the 'Galvin Manufacturing Company', today known as Motorola.

This net today (now on 44.540 Mhz.) is now being switched to the 470 Mhz. band. Two UHF pairs are in service to dispatch supervisors, mobile repair units, and other service vehicles.

The second net was put into service in the late 1950s. This is a carrier current system using the rapid transit rails for RF. The frequency is somewhere in the 400 to 500 Khz. band using FM. Lineside transmitters are set every 2-3 miles apart. Mobiles are 'carry-on' units plugged into a connector in the control cab. Early units are the size of 2 attache cases. Later units are the size of a single case. They are labeled 'FEMCO, Irwin, PA.'

The last 200 cars delivered sport low profile antennae and 8 channel built-in control heads. Radex cable will be installed in the subways, and the longwave system will be phased out.

The bus radio system is the most sophisticated. You will see 470 Mhz. low profile antennae on the roof. The control head is mounted above the drivers-side window and hanging down is a VHF-HI 'rubber duckie' antenna. There are 400 low power transmitters at key bus intersections with a range of about 1000 feet. When a bus passes one of these 'signpost transmitters', a location register is updated in the bus communications unit. The base station computer can interrogate the bus for position at any time. If a silent alarm or any other transmission is sent, the last 'signpost' passed is transmitted. The 2 data channels are also used for broadcast and 'call-out' messages: "Bus 3576 (or Run 956) pick up your phone", or "The rereoute for the fire on 81st is ended", or "No Smoking Please" are typical. Picking up the handset will select a 2-way talk channel.

But there are flaws. Drivers resent the 'Big Brother' location system and sometimes dial in the wrong run number. Silent alarms are pressed by accident. Drivers will not press a silent alarm for a passenger robbery because they will pass the same point again. Some of the 'signpost transmitters' are silent.

The demand to meet schedules is intense. I saw a passenger injured by a thrown rock. The motorman radioed the dispatcher while standing in a station directly above a police car. The dispatcher directed the train to go to the end of the line in the next town. There, the police took the victim to a hospital in a third town. To catch the offender would have meant a delay!

The CTA has its own city-wide telephone system. Walking past a lamp post and hearing it ring is not unusual as 'pointmen' are posted at important locations to keep the system running. It still doesn't work in a snow storm.

CTA Frequencies

Supervisory and Service Net	(Being phased out)	44.540
	(Being phased in) B/MR	470.5375
	B/MR	470.6375
Rapid Transit Net	(Being phased out)	400-500Khz
	(Being phased in)	470.9875

F & RS - IA,IL,IN,KS,KY,MN,MO,NB,ND,SD,WI (continued)

Bus Net	Location data/Voice	B	453.275
		B	453.325
	Voice Only	B/MR	453.225
		B/MR	453.375
		B/MR	453.425
		B/MR	453.475
		B/MR	453.525
		B/MR	453.575
	Signpost (Data)		153.740

All CTA channels licensed as Local Government except 44.540- Bus, Motor Carrier, and 400-500 Khz., Part 15 low power devices

From LUTHER (MO-001):

FD	Cape Girardeau	MO	Dispatch	KCP586	B/M	154.310
PD	Cape Girardeau	MO	Dispatch	KAB288	B/M	155.250
PD	Cape Girardeau	MO	Mutual Aid	KAB288	B/M	155.475
PD	Cape Girardeau	MO	Tactical	KAB288	B/M	155.790
PD	Cape Girardeau	MO	Sheriff Net	KAB288	B/M	155.730
LG	Cape Girardeau	MO	City Gov't	KIT973	B/M	155.085
LG	Jackson	MO	City Gov't	KTV822	B/M	37.100
LG	Jackson	MO	City Gov't	KJL655	B/M	154.055
SO	Cape Girardeau Co.	MO	Dispatch	KAK312	B/M	155.730
SO	Cape Girardeau Co.	MO	Tactical	KAK312	B/M	155.790
SO	Cape Girardeau Co.	MO	Mutual Aid	KAK312	B/M	155.475
SO	Cape Girardeau Co.	MO	Dispatch	KFO729	B/M	155.670
LG	Cape Girardeau Co.	MO		KFO729	B/M	153.730
LG	Cape Girardeau Co.	MO	Co. Gov't	KAP257	B/M	158.880

From ED (IL-004):

LG	Chicago	IL	Fire Dept. Paging/ Street Dept.	B	453.500
LG	Chicago	IL	Fire Alarm Wire Repair/Bureau of Electricity	B	453.975

Anonymous:

Press	Kansas City	KS	KS Star News	B/M	173.225
Press	Kansas City	KS	Stauffer News	B/M	173.325
PD	Kansas City	MO	In'tl Airport PD	R	453.425

DC FL GA NC SC VA WV AL AR LA MS OK TN TX

RCMA Regional Editor
P.O. Box 270294, Tampa, FL 33688

Have yet to have any feedback to this column, its too early I am sure. Please do write and send in info. I am going to use the 25th of each month as my deadline. I must have my copy to my editor by the 5th, so this will give me a little time to get it ready.

This month, I have written a bit about TV operations in my area, if this and last months story on newspaper radio is not of geneeal interest, let me know. I would

like to have members provide similar articles on radio networks in their areas. I am going to run out of systems pretty soon! I do plan on the Tampa Police next month unless I get something better in the meantime.

I would also like to get up a collections of info on beats and codes. I doubt that they should be published unless very unusual, but I would be happy to serve as a clearinghouse for this type info as well as for freqs. Just send SASE for info. Have next to nothing at present!

Some members may not know that the Superintendant of Public Documents, Government Printing Office, Wash. D.C. has a number of interesting publications. Many of them are rather technical, but some are worth looking into. Write them and ask for info on radio communications.

Incidentaly, if anyone is interested in Railroad, I can probably get most of that from my area. Will be happy to file it for everywhere else.

I just got my copy of the Confidential Frequency List 4th edition. I am very disappointed. It contains nothing above 25.6 mhz and nothing below 4mhz! The last edition was organized by particular types of services so that you could e.g. flip to RTTY press or Embassy stations headings among others. The new book is organized by frequency. While each slice of freqs are identified as to allocation of type of service, it is going to be very tedious to look up every Interpol freq, an easy task in the last edition. Missing altogether was the very useful Potpourri section which listed a number of useful vhf/uhf channels. Spend your $6.95 elsewhere if not an SWL.

TV station communications can be very exciting. It can often really explain things better than police or fire communications. Many media types like to talk and also aren't as indoctrinated with security or standardized expressions. Often, there are some strong personalities that don't get along. Some of the shouting matches I have heard (including very specific and profane namecalling) have been very amusing, especially when you see the same calm, ordered people in front of the camera! Another highlight was when one newsman went to another station. He took his old employers frequency with him and began having his reporters follow stories by following the other station. This eventually led to some elaborate hoaxes and some name calling as well as constant comments over the monitored channel about the "low" quality of the eavedroppers. There was talk of going to the FCC, but since all stations monitor communications, it was realized that any complaint could backfire.

In the Tampa area we have three network stations. For CBS there is Channel 13 WTVT. They have two frequencies. 450.350 is on a repeater and is the main ispatch channel. They also use 450.150 for their Electronic Newsgathering (ENG) operations (i.e. live video feeds). There is no repeater, so you can seldom hear their mobiles on this channel. They also use it sometimes for short range car to car, or for security so those with scanners can not hear. They use their radios extensively and I believe have mainly GE mobiles with a few Standard walkies and lunchpail type portables.

Representing NBC is Channel 8, WFLA using RCA TACTEC Universals. These are Walkies which plug into a mobile console which charges the WT battery, amplifies it from 5 watts to 60, and increases audio quality to that of a conventional mobile. Their frequency is 450.450. They use a repeater, but unlike 13, they have two channel radios equiped to transmit on either the repeater input or the out put. This means, of course, that when out of repeater ranoe, two mobiles can transmit on the receive freq to one another.

Channel 10 is the ABC affiliate which uses 170.150. They tend to be the last on the scene, but they are working very hard to improve and have made great strides in the last couple of years. They have very powerful mobiles, I don't know what type however. They talk alot, but are not as professional as 8 or 13.

To find the TV frequencies in your area, try looking them up in Police Call. If you can't find them, program all of the BA allocated freqs from the back of Police Call. You will find them around 161mhz and 450 mhz. There is also one at 166.25 and another at 170.15. They were all listed in a copy of Scan if you have it. After you have them all programed, listen, especially the last couple of hours before the main newcasts. It will be well worthwhile.

BILL GODBEY (FL-009) reports that the Cape Kennedy Fire Dept. might be usings freqs of 173.562 and 173.622. He also notes that the Palm Beach Co. Sheriff's patrol boat has operated on Marine 70(156.525) to communicate with other harbor patrol craft.

Bill has also provided some very unusual freqs for Florida tourist attractions. These are very hard to come by. I have tried to get the one for Busch Gardens here in Tampa, but have yet to succeed.

FLORIDA AMUSEMENT PARKS BILL GODBEY(FL-009)

Disney World			157.740
Disney World			453.925
Disney World			453.975
Disney World			461.600
Disney World			462.625
Disney World			462.675
Disney World			467.625
Disney World		KAA8102	467.675
Lion Country Safari	CB 11		151.925
Everglades Nat. Park Boat tours			154.54
Silver Springs			154.57

*****Questions and contributions should always be sent to the Regional Editor covering the locality in question.*****

AZ CO ID MT NM NV UT WY

REGIONAL EDITOR NEEDED!

CA OR WA (Except 7 Southern CA Counties)

Regional Editor Pending, but applications still being accepted.

Southern CA

COUNTIES OF IMPERIAL, LOS ANGELES, ORANGE, RIVERSIDE, SAN BERNARDINO, SAN DIEGO & VENTURA

REGIONAL EDITOR NEEDED!

Temporary editor: Iden Rogers
P.O. Box 4693
Riverside, CA 92514

If anyone has an interest in being regional editor for the above seven Southern California counties, please contact John Pilger, the column editor.

In last month's column I mistakenly identified the California Health and Safety Code as the code containing Section 5150. It comes from the California Welfare and Institutions Code instead.

Recently I wanted to check some motor vehicle equipment laws so I bought a California Vehicle Code book. They cost $2.00 and are available at the Department of Motor Vehicles offices. Quite a few radio codes are in fact section numbers from the Vehicle Code. It is handy to use for numbers that are not common. The section numbers are numerically listed in the back with brief definitions for quick reference. A bonus is also found in the back of the book where parts of almost 20 other California codes are listed on 192 pages (including 5150). For $2.00 it looks like a worthwhile reference for California monitor listeners.

Another handy reference is the "Penal Code of California, Peace Officers' Abridged Edition". Since many radio codes like 187, 211, 261, 415, etc. are actually Penal Code section numbers this book is a must. It lists ones not found on regular radio code lists and gives good definitions/explanations of each. Aside from being a good reference for California monitor listeners it is interesting reading. I bought my 1975 edition (awhile back) for $2.40 in a college bookstore where Administration of Justice courses were taught. Later editions should be available now. It might also be found in some regular bookstores. Possibly it can be ordered directly from the state. For info you could try writing the address inside the cover: Department of General Services, Documents Section, P.O. Box 1015, North Highlands, CA 95660.

Does anyone know what the State of California is doing or is intending to do on frequencies in the 217.000 to 218.500 MHz range FM?

From ERIC (CA-LA-045):

	AGENCY	FREQUENCY	USE	CALL
PD	Santa Anita Fashion Park Mall Security, Arcadia CA	464.525 mhz	B/M	
PD	Pasadena City College Security Pasadena, California	462.675	B/M	KAA7406

PD	Calif State University, Long Beach Police Department	153.74	B/M	KLK542	
PD	San Marino Police Dept., CA	156.33	B/M	KMA235	Freq 1
LG	" " " " "	155.10 (?)	B/M		Freq 2
FD	" " " and Fire	154.175	B/M		Freq 3
PD	Long Beach Police Dept., CA	460.125	R	KMA651	Freq 1
PD	" " " " "	460.225	R	"	Freq 2
PD	" " " " "	460.350	R	"	Freq 3
PD	" " " " "	460.450	R	"	Freq 4
PD		460.025	R	"	CLEMARS
FD	" " Fire "	153.95	B/M	KMA715	
PD	" " Police " "	158.79	B	KMC 54	Intercity

Long Beach PD frequencies are used as follows:
Freq 1: West of Cherry Ave. (Downtown area) dispatch
Freq 2: Inquiry to desk & car to car
Freq 3: East of Cherry Ave. (Los Altos area & north Long Beach) Dispatch
Freq 4: Detectives & special situations.
NOTE: All communications switch to Freq 1 @ approx 0215 hrs. when swing shift (1700-0215 hrs) goes off duty. Officers work 10 hour shifts.
Code Red means Emergency traffic only, terminate all radio communications not related to incident.
CLEMARS 460.025 is occasionally used for special events, ie: L.B. Gran Prix, VIP visitors, etc. Patrol units have Freq 1, 2, 3, 4 only.
Unit 72 is the helicopter.
MACH 1 is mobile command post & uses all area frequencies including 153.74 mhz, Calif State Univ, L.B. Police.

San Marino Police occaisionally will use their local government channel for Freq 2 for special info (especially after 5 pm when city government crews are off duty.)

San Marino Police also contracts to Pasadena Police Department for Helicopter patrol services. The Pasadena PD helicopter is referred to as "PD 1" or "PD 2" depending on how many helicopters that they may be using. "PD 1" can communicate with San Marino PD on 156.33 mhz.

PD	Pasadena Police Department	506.4625	R	KWX738	Freq 1
PD	" " "	506.6875	R	"	Freq 2
PD	" " "	509.4625	M		Freq 3
PD	" " "	509.6875	M		Freq 4

NOTE: Pasadena Police Department uses Freq 1 for all dispatching and for most car to car. Freq 2 is used for extensive car to car communications, plus communications between patrol units and the Department's Records Bureau which has a base station. Freq 3 is the input of the repeater for Freq 1, and is for very short range communications between units. Freq 4 is the same, only using Freq 2's input (3 mhz higher).

FD	Pasadena Fire Department	46.10	B/M		Freq 1
FD	" " "	46.20	B/M		Freq 2

Note: Pasadena Fire Department uses Freq 1 for all dispatching and for most Pasadena fire tactical communications. Freq 2 is a tactical channel with mutual aid with several adjoining cities. There are plans to combine the efforts of the Pasadena, South Pasadena and Glendale Fire Departments into one coordinated organization serving all three cities. Mutual communications and lower costs in fire service to the cities are the main factors.

Note: Every January 1, comes the Rose Parade and Rose Bowl Game in Pasadena, California. Police services for the Rose Parade parade route on Colorado Blvd. are generally provided by the Los Angeles County Sheriff's Department. Police services for the remaining portions of the city of Pasadena are served by the Pasadena Police Dept. Frequencies in use on New Year's Day are as follows:

PD	Pasadena Police Department	506.4625	R	Freq 1
PD	" " "	506.6875	R	Freq 2
SO	Los Angeles County Sheriff	39.48	B/M	F"Charlie"
SO	" " " "	39.32	B/M	F"William"
SO	" " " "	39.72	B/M	F"Edward"
CHP	California Highway Patrol	42.34	B/M	F"Blue"
FD	Pasadena Fire Department	46.10	B/M	Freq 1
PD	Pasadena City College Security	462.675	B/M	

In addition to those frequencies listed above, are a multitude of frequencies including those operated by: Automobile Club of Southern California; various tow companies, private security patrol companies, the American Red Cross, Amateur Radio RACES frequencies, Citizen's Band REACT services, city work crews, news media, etc.

Pasadena Police Department Freq 1 is used solely as a dispatch and car to car tactical frequency for all routine police service dispatches for the city of Pasadena. Pasadena Police Freq 2 is used as the command coordination radio channel for the Rose Parade, in addition to several other parade command channels. The Los Angeles County Sheriff's Department sets up a remote communications command center near Pasadena City Hall to coordinate their communications. Freq "C" or "Charlie", Freq "E" or "Edward" and Freq "W" or "William" are simplex frequencies and are used for Sheriff Department communications for supervision, transportation of arrested subjects, and other services. The California Highway Patrol coordinates its activities by operating in the simplex mode on the "Blue" frequency.

Pasadena Police Department-Unit Numbering System

All patrol units consist of a number; 1, 2 or 3 (indicating shift); which is followed by a letter (indicating type of unit; which is followed by a two digit number indicating the beat area.
Example: 3L21 Watch III, one man patrol, beat 21.

Watch III, 1600-2400 hrs.
Watch II 0800-1600 hrs.
Watch I 0001-0800 hrs.

L	One man patrol.		
K	Two man patrol.	11-19	Beat one patrol.
A	Agent-uniformed investigator.	21-29	Beat two patrol.
M	Motorcycle traffic unit.	31-39	Beat three patrol.
T	Vehicle traffic unit.	41-49	Beat four patrol.
R	Special unit.	51-59	Beat five patrol.
S	Supervisor or detective.	61-69	Beat six patrol.
PR	Parking enforcement.	71-79	Beat seven patrol.
PD	Helicopter.	10, 20, 30, 40, 50, 60, 70	Supervisors.

	Newport Beach Police Dept.	460.275	R	Dispatch	F"Green"
PD	" " " "	*460.150	M	Car to Car	F"White"
PD	" " " "	*460.200	R	Car to Car	F"Orange"
PD	" " " "	*460.300	R	Records Info	F"Purple"
PD	" " " "	*460.500	R	Car to Car	F"Blue"
PD	" " Fire "	46.14	B/M		Freq 1
FD	" " Harbor Patrol	*45.92	B/M		Freq 1
PD	" " Police "	*460.025	R	Emergency	F"Red"

Note: The City of Newport Beach Police, Fire and Harbor Patrol operate on radio frequencies controlled by the Orange County Communications Department. The Police Department identifies itself on the channels by using "Station 43". The Harbor Department is "Station 54", Lifeguard is Station 53, same frequency as the Harbor Patrol. The Fire Department identifies as Station 83. Orange County Communications Center identifies as "Control One".
*Indicates a County operated radio frequency.

Newport Beach Police Department-Unit Numbering System

All patrol units consist of a five digit number; beginning with 43. This number indicates Station 43, Newport Beach Police Department, in the Orange County Communications system numbering. This number is then followed by a single digit which indicates the type of unit.

1 Watch I, 0001-0800 Patrol
2 Watch II, 0800-1600 Patrol
3 Watch III, 1600-2400 Patrol
4 Traffic Division
5 Detective Division
6 Administrative Division

This number is followed by two more numbers for patrol beat areas.
Example: 43214 Newport Beach Police, Watch II Patrol, Beat 14.
Traffic, Detective and Administrative Divisions use slightly different numbering methods.

Traffic Division
410 Supervisor
411-429 Vehicle traffic unit (with radar).
431-439 Motorcycle traffic unit (some with radar).
461-499 Parking enforcement.
Detective Division
Each detective is assigned a three digit 500 series number, ie: 524, which identifies as 43524.
Administrative Division
Same system as Detectives, except with 600 series numbers.
631-639 Animal Regulation

PS R.E.A.C.T. Radio Emergency Associated Citizens' Team
462.675 R/B/M

Some R.E.A.C.T. teams have adopted this Class-A CB channel for administrative and/or field operations in addition to the normal CB channels and monitoring of CB channel 9.

CANADA

Rory McEvoy, Regional Editor
12 Casslegrove Blvd., Unit 9
Don Mills, Ontario, Canada M3A 1K8

Rory's regional column will begin in the August Newsletter.

It probably would be best for all Canadian frequencies and radio systems information to go through Rory. He will use what is appropriate for his column and pass along to other special interest editors items that are appropriate for those columns.

Concerning not publishing "sensitive" frequencies, Rory says, "I am in agreement with you with regards to the U.S. but not Canada. RCMP (Royal Canadian Mounted Police) is a national police force responsible for general law enforcement in all provinces and territories of Canada with the exception of Ontario and Quebec which have provincial police forces. All the more common RCMP frequencies are widely known. However, I would like to use personal discretion and withhold frequencies I receive in confidence which I know to be very sensitive areas. A major example of frequencies I would not publish were those for the Montreal Olympics Security Network on several UHF channels. We do not have anything like the Secret Service, FBI, DEA, etc. here."

It certainly seems that Canadian members have a good man representing them. He says, "I will gladly donate about $5 a month to support the cost of giving Canadian content unabridged coverage in the Newsletter. This is on top of my annual dues. No, I'm not rich, just radio crazy!" This is a very generous offer and we hope it will not be necessary.

Canadian members (and U.S. members living near the Canadian border) may send Canadian material to Rory starting at any time. (IBR)

SATELLITES

Bill Blomgren & John Coker, Editors

Send information about satellite frequencies which you have received with type of traffic heard, orbital data, hobby receiving equipment and antennas and questions pertaining to satellite monitoring to: Bill Blomgren, 503 E. Mulberry, #3, Normal, IL 61761.

Bill and John plan to start their column with the August issue. All satellite listeners are urged to support this new column by sending in material.

Last month, in an effort to get the column started, I encouraged members to send in info but I accidently used the Anaheim P.O. Box number in the Riverside address and that doesn't work too well. If anyone sent in material only to have it returned to them, I apologize. Please try again and send it to the above address.

MONITORING & THE LAW

Bob McGovern, Editor

Send all articles, references, copies of monitoring laws and questions pertaining to the legal aspects of monitor radio listening to: RCMA, P.O. Box 3152, West Palm Beach, FL 33402.

The purpose of this column is to provide a forum so that club members may present information and comments concerning the legal aspects of monitoring. Disclaimer: The editor of this column is not responsible for the accuracy or validity of the material presented herein. The information presented is not to be construed as legal advice.

This month we shall present and comment on the Philidelphia City Ordinance Number 10-817, titled Police and Fire Radio Broadcasts.

"(1) No unauthorized person shall intercept or interfere with any police or fire radio broadcast. No person shall manufacture, own, possess, sell or transfer any radio receiver or converter of any nature or type which is capable of receiving or interfering with police or fire radio broadcasts.

No person shall alter any radio receiver or converter in any manner so that the receiver or converter makes it possible to interfere with or receive police or fire radio broadcasts.

(2) Confiscation. Any radio receiver capable of receiving police and fire radio broadcasts shall be presumed to be used for that purpose and any police officer is authorized to impound the receiver and hold it until the owner arranges for it to be re-equipped so that it will not be capable of receiving or interfering with police or fire radio broadcasts. If the owner does not make such arrangements within a period of thirty days, the receiver shall be destroyed.

(3) Exemptions. The above shall not apply to any law enforcement agency or any public news media.

(4) Penalty. The penalty for violation of this section shall be a fine of not less than one hundred dollars and not more than three hundred dollars, together with imprisonment of not less than thirty days, nor more than ninety days."

It appears that this ordinance is unreasonably restrictive. First, the mere manufacture or sale of such a radio, not to mention the use of, is unlawful. Also, notice that it applies to any police or fire broadcast. This editor wonders what action would be taken if a person was caught monitoring a police or fire agency other than that of Philidelphia, and at the time was driving on its city streets. Secondly, the law does not distinguish between mobile, portable, or

base monitoring. Third, it is conceivable that a multi-band tunable, portable radio which contained a public-service band is unlawful to possess, period. How about a television receiver equipped to receive the audio on channels 14 through twenty, which have been designated in some areas for police and fire broadcasts?

Based upon a strict interpretation, this editor concludes that this ordinance was poorly written, overly restrictive, and is most likely unconstitutional. How do you feel about it?

CLUB MAIL

From DAN (ND-001): "It is a serious misdemeanor in Minnesota to have a mobile monitor capable of receiving any police, fire,or government frequency, unless a valid permit issued by the Minnesota Department of Public Safety is carried by the owner of the radio. The permit is only issued upon a written letter from a sheriff in the state, to the Bureau of Criminal Apprehension stating the frequencies he authorizes. The permit that is issued restricts you to those authorized frequencies only and lists the vehicle (only one) description it is to be used in. Permits expire the end of each year and must be renewed by the same process. Out of state visitors must comply with the above, with no exceptions. So, play it safe."

Editor's note: According to the above law, any person who is convicted, for the first offense, shall be guilty of a misdemeanor, and for the second and subsequent offenses shall be guilty of a gross misdemeanor. However, in State v. Peterfeso, 1969 169 N.W. 2d 18, it was held that this law also affects the sale of ordinary radio and television equipment which can be inexpensively modified to pick up such frequencies and thus fails to provide definite standards and violates due process.

Minnesota 299C.37 Subdivision 1 reads as follows:
"No person other than peace officers within the state and the members of the state highway patrol shall equip any motor vehicle with any radio equipment or combination of equipment, capable of receiving any radio signal, message, or information from any police emergency frequency, or install, use or possess the same in such motor vehicle without first obtaining permission to do so from the superintendent of the bureau upon such form of application as he may prescribe."

Several other letters were received and will be included in the next column. Keep the mail flowing.

TIDBIT: The American Bar Association in Chicago is authorized to use 151.6250 anywhere in the United States. Their call sign is KV 8250.

HAPPY LISTENING

☆ MILITARY ☆

Robert B. Grove, Editor

Send all ARMY, NAVY, COAST GUARD, MARINE and AIR FORCE (including military aircraft) frequencies and radio system details to: Robert B. Grove, Route 1-Box 156, Brasstown, NC 28902. Sensitive military frequencies will not be published.

It would stand to reason that contributions and correspondence from members would average out roughly even between military and federal government listings. Oddly enough, this month's correspondence was 100% military! Are you federal government buffs out there going to sit tight for this?

From Iden (CA-RI-001)

The most readily available and complete source of UHF aircraft frequencies (225-400 MHz) is the IFR Supplement issued bimonthly by the DOD. For a single copy, send $5.00 to: National Ocean Survey, Distribution Division C-4415, Riverdale, MD 20840. Request "DOD Flight Information Publication (FLIP) Supplement, U.S. IFR". Checks should be made out to "Dept. of Commerce---NOS".

Another publication available to military aircraft enthusiasts is "Planning Section I (GP) General Information". It is priced at $3.00 per issue, published semi-annually. Expect a delay of about two months for either publication.

(Ed. Note: The FLIP publication includes low frequency beacons, HF SSB/CW discrete frequencies, and VHF/UHF air-to-ground allocations nationwide. Other FLIP publications are available listing Europe, Africa, South America, and other regional interests. HF listeners might consider ordering the entire series. A general catalog is available.)

From Jack (CA-SL-001)

Can anyone give me any frequencies for Camp Roberts Military Reservation and Ft. Hunter Liggett (both are in Monterey County, California)?

RESO San Luis Obispo, CA--Army helo to Med. is on 36.50 MHz.

From Jan (FL-010)

An explanation on the freq. 148.635. It is not the Army Corps of Engineers, but Army Nike Missile Sites (being phased out).

(Ed. Note: In the May issue, I showed 148.635 as Army Corps of Engineers because it is listed as such in the Army's own IRAC printout. We may probably assume that it is used to interface missile site operations with those of the Corps of Engineers in Miami).

From John (MD-006)

I am interested in obtaining military intelligence and CID frequencies. Here are a few military allocations for RCMA members:

413.000	Andrews AFB security police, F-1
413.275	Andrews AFB security police, F-2
407.425	Andrews AFB command post PBX
173.5875	Andrews AFB Fire "Red Control"
165.0875	Walter Reed Army Medical Center, Wash. DC police/fire ("Main"; "Big Brother")
173.4125	USA Ft. Huachuca, AZ police

173.4125	USA Presidio, San Francisco, police
173.4625	USA Presidio, San Francisco, fire
173.325	USA Ft. Huachuca, AZ, fire
154.280	Presidio/San Francisco mutual aid
157.100	Presidio/US Coast Guard liaison search and rescue

A survey has just begun to locate two mountain-top repeater sites for UHF to expand the fire radio system north. Presidio Fire Department is expected ultimately to have responsibility for all Army fire activities in northern California. Coordination by the Chief will be centered at the Presidio, and a switch to the UHF repeater link is expected within two years. Frequencies have not yet been chosen at this writing.

John also has a challenge for members. He has been trying to determine Army CID frequencies at Ft. Meade by measuring antenna lengths on the Army vehicles. A 16" whip is assumed to be for the 173 MHz range, but a 26" antenna really has John baffled! If it is a ¼-wave ship, it would resonate in the middle of the FM broadcast band; ½-wave would be around 212 MHz; 5/8-wave would be in the UHF aircraft band. Readers have any ideas?

From Ken (TX-003) USAF ten codes.

10-1 receiving poorly
10-2 receiving well
10-3 Stop transmitting
10-4 acknowledge/will comply
10-5 stand by
10-6 station clear
10-7 out of service
10-8 in service
10-9 what is your location?
10-10 return to normal location/post/patrol
10-11 return to station
10-12 phone this office
10-13 trouble--help needed
10-14 latrine break for post ____
10-15 non-hostile emergency at __
10-16 hostile emergency at _____
10-17 security alert
10-18 alert force launch
10-19 disregard previous transmission
10-20 repeat; reception poor
10-21 radio check
10-22 security check
10-23 time check
10-24 weather/road check
10-25 proceed to ___
10-26 enroute to ___
10-27 estimated time of arrival
10-28 arrived at scene
10-29 completed last assignment
10-30 convoy or escort
10-31 stopping/investigating motor vehicle (give description/location). If unit not heard from within 10 minutes, send cover unit.
10-32
10-33 Crime in progress at __
10-34 negative
10-35 disregard last assignment
10-36 vehicle accident at __
10-37 are you OK?
10-38 Yes, I'm OK. Area secure
10-39 upload
10-40 download
10-41 hot cargo
10-42 I'm busy challenging
10-43 alarm received sector __
10-44 assessment post/area
10-45 request ART

An interesting article in Communications News (May 1979) indicates that the FCC has provided for a Joint Tactical Information Distribution System (JTIDS) in the 960-1215 MHz aeronavigational band. Developed by DOD, JTIDS is an integrated navigation/communications identification system for air, sea, and land installations.

A spread-spectrum technique implementing frequency hopping is intended.

Quite alot of good military contributions are coming in. Let's keep up the good work! See you next month!

FEDERAL GOV'T

Robert B. Grove, Editor

Send all non-military Federal Government frequencies and radio system details to: Robert B. Grove, Route 1-Box 156, Brasstown, NC 28902. Sensitive federal law enforcement frequencies will not be published.

With the proliferation of scanners permeating the consumer market, government agencies are becoming increasingly concerned for the privacy of sensitive communications. A recent "bust" on a Miami, Florida woman who was ostensibly providing intercepted information to criminal elements punctuates the problem.

Some agencies are switching to digital encoding--much more difficult to decode, and much more expensive to implement. Others are planning to switch frequency ranges. Where will they go? A few rough guesses might start a few inveterate tinkerers thinking. 72-76 MHz is a blank chunk of spectrum between TV channels 4 and 5. It has some low powered industrial use, some highway callbox use, and some aeronautical outer market use (75 MHz).

Many channel-splitting opportunities exist in the 108-136 MHz aeronautical band, with most aircraft using 50 or 100 kHz channel spacing.

138-144 MHz is still out of range for commercial synthesized scanners. 216-220 MHz is already designated Federal government, although ostensibly for navigational use. A former CIA operative once told me that OWVL's (one-way voice messages) were monitored from Cuba to Florida near 220 MHz in the mid 1970's. Are they still in use? They were similar to the widely-reported "spy-numbers" stations being reported currently throughout the HF spectrum.

Some low-powered FM tactical communications already exist in the 225-400 MHz UHF aeronautical AM band.

There seems to be a continued reluctance on the part of manufacturers to include the 406-420 MHz band (although poor image rejection makes these frequencies readily accessible on conventional scanners).

The UHF TV band 512-806 MHz has very spotty use by broadcasters; could FCC/IRAC agreements place communications in here? 890-948 MHz is already allocated to federal government fixed and mobile services on a secondary basis. Might this presently-inaccessible band be called into use?

The band 1710-1850 MHz is already in use by federal mobile and fixed users, primarily for point-to-point links. With one prominent scanner manufacturer eyeing the 806-960 MHz band, can the Gigahertz region provide safe harbor for sensitive law enforcement surveillance?

I would be pleased to hear from members regarding this subject of unusual or speculative frequency allocations. See you next month, and...keep those frequencies coming in!

CONTACT

A column devoted exclusively to the purpose of helping members contact other members. If you want to meet, telephone, or correspond with other members (by letter or cassette tape) in a certain geographic area or other members who have similar listening interests, this is the place to say so. Interested members will contact you directly so be sure to give your telephone number and best time to call and/or your address. Write to: RCMA, P.O. Box 4693, Riverside, CA 92514.

Members interested in sharing cost of monthly FCC press release subscription. Subscription rate: $336.00 per year. The more members that share cost, the cheaper it is for all of us. I will assume responsibility of copying releases monthly and redistributing to participating members. Send me a postcard with name, address and telephone # if interested. TONY (NJ-005), 231 Kinderkamack Rd., Westwood, NJ 07675.

Need names, addresses (if available) and telephone #'s of NYC/Metro members. Please send me a postcard with info. TONY (NJ-005), 231 Kinderkamack Rd., Westwood, NJ 07675.

My main interests include monitoring LASO, CHP, LAPD, Orange County law enforcement channels, Long Beach Police, Pasadena Police, Rose Parade/ Rose Bowl coordination, etc. I am starting to become interested in Marine emergency communications on VHF Channel 16 (156.80 MHz) plus Aircraft frequencies. Anyone with similar interests, please contact me. Thank you. ERIC CHRISTENSEN, 2360 Brentford Rd., San Marino, CA 91108.

I now have the capability of corresponding via cassette tape and any member who wishes to correspond via this medium feel free to do so with me as I prefer this over sending letters, it gives more of an "in-person" effect. DAVID McLAREN, RR#2 County Line Rd., Rock Falls, IL 61071. (David would also like to compile a list of Illinois members. Interested Illinois members should contact him.)

Anybody out there have a good frequency file program written for TRS-80 level II? The best arrangement would probably be a list by frequency, with access by frequency, agency, and location. I have an excellent level I program, but don't have the time to rewrite it for my level II. Anyone want to take on the project? Bob Grove, Rt 1 - Box 156, Brasstown, NC 28902.

Speaking of computers, a major publishing company is looking for a qualified author to write a hobby-oriented computer book. It must have a strong tie-in with ham radio, including specialized functions like slow-scan TV, Morse code and RTTY readout, etc. If you are such a qualified writer, please contact Bob Grove for further information. Rt 1 - Box 156, Brasstown, NC 28902.

I have been assigned to do a feature article on satellite TV reception for a major magazine. Any correspondence from members to suggest sources and hints to cut costs would be appreciated. Also, does anyone have a good collection of frequencies used for satellite communications relays? Bob Grove, Rt 1 - Box 156, Brasstown, NC 28902.

(Editor's note: Members are encouraged to also send any and all satellite info and frequencies to our new "Satellites" column.)

Miscellany

RCMA, P.O. Box 4693,
Riverside, CA 92514

JOHN (IL-012) sent in a letter and a long newspaper article regarding the 1979 World Administrative Radio Conference (WARC) to be started in September. Amateur radio operators and others active in world radio affairs are fully aware that this upcoming radio conference could change many radio frequency allocations worldwide. Some monitor listeners may not be aware that decisions made at this conference could affect the frequency bands to which we now listen. From the Chicago Tribune:

"The World Administrative Radio Conference (WARC) of the International Telecommunication Union (ITU) will meet for 10 weeks beginning Sept. 24 in Geneva, Switzerland, to reallocate the radio spectrum for the entire world.

"The ITU, with 154 member nations, determines technical standards and uses for the entire spectrum, ranging from frequencies below AM up through frequencies for short wave radio, radar, and television, to super high frequency (SHF) and extra high frequency (EHF) ranges used by satellite communications and radio-astronomy.

"WARC sets the policy for the ITU, which has the ultimate authority over uses of the radio spectrum and technical standards. The ITU dates from 1865 and now is affiliated with the United Nations.

"Each member nation has one vote, and the less developed countries have a clear majority of votes. The decisions of the WARC will be in effect until the end of this century."

The big concern, of course, is that the less developed countries with all their votes could implement changes in the use of the radio spectrum that might not necessarily be in the best interest of the industrialized nations.

Well, how might all this affect monitor listeners? No one really knows at this point. A great deal of the emphasis and negotiations will be centered on frequencies below 30 MHz, but the U.S. apparently will push for the sharing of or the conversion of more UHF-TV frequencies to land mobile radio frequencies and some of the Third World nations may oppose this.

It will be interesting and exciting to learn of the final outcome of this conference, not just for frequencies of interest to monitor listeners but for frequencies in the entire radio spectrum.

From DAVID (IL-002): Due to the fact that most of us are trying to program scanners outside of their suggested limits, there has been somewhat of a Gentlemen's Agreement between the scanner manufacturers and the F.C.C. In simple terms, the F.C.C. will not certify a scanner if it can be programed outside of the frequency specification limits as listed by the manufacturer. This sounds like a ploy to keep un-wanted ears from hearing sensitive and highly secretive transmissions.

(Editor's comment: I'm sure many of us have wondered about this. Does anyone have any info on this?)

TONY (NJ-005) sends in the following: "'Master File Search System Users Guide' by Phillip Tremper and Joseph Cesaitis of the Spectrum Allocation Division of the FCC was developed as a spectrum allocation tool. The program computes and generates statistics about the existing licensee date file, a compressed subset of the non-government master frequency file. The file can be accessed via three search parameters--frequency, area and date. The parameters can be specified in a variety of ways. There are several output reports obtainable. Listings of retrieved records and tabulation and printer plots of transmitters, mobile units and power densities can be generated. The retrieved data can also be saved for future processing. A related report is 'Survey of the Non-Government Master Frequency File'. Price: $6. Order by accession number PB293289 from the National Technical Information Service, Arlington, VA 22210."

PROBLEMS WITH YOUR BEARCAT? We hope not, but if you should have, Electra's Customer Service Manager, Kenneth Wilson, offered the following information:

1. Refer to Operating Instructions in the owner's manual to confirm that the proper procedure for operation has been followed.
2. Recheck the power outlet, power cord, control settings, display and sound.
3. If it is then determined that the receiver requires servicing, refer to the warranty instructions enclosed with your unit for the nearest repair facility.
4. When preparing the receiver for shipment remove the telescoping antenna to avoid damage to it or the internal circuit assemblies.
5. Pack the unit in its original packing and carton or other sufficient packing material. Please include a brief, concise description of the difficulty you are having, along with your name, address and phone number, along with a copy of your purchase receipt.

If the owner experiences any unusual difficulties, please have him direct his letter to the address below:

Electra Service Department
8418 E. 33rd St.
Indianapolis, IN 46226

WALTER (CT-006) sent in two newspaper articles that relate to a potential health hazard that exists when one is too close to mobile and walkie-talkie antennas when transmitting. This does not affect us as monitor listeners but nonetheless is interesting.

"The state Department of Health Services has found that antennas on Bristol police cruisers emit dangerous radiation and recommended Wednesday that all cruisers bear highly visible red warnings of possible health hazards.

"In a report to be released today, the department said tests also found that radiation emitted from Bristol's 150-megahertz police walkie-talkie units are barely within the federal limits.....

"The Bristol 800-megahertz police cruiser system 'emits microwave radiation in excess of present occupational safety and health standards' within a one-foot radius of the cruiser antenna, the health department report says....."

The forgoing was from "The Hartford Courant", May 24, and the following from "Waterbury Republican", May 25.

".....A Department of Health, Education and Welfare newsletter from the National Institute for Occupational Safety and Health said federal radiation emission standards will be revised this year.

"Most officials believe the standards will be made more strict."

It will be interesting to see if this concern begins to spread around the country. It would be quite a sight to see police cars and other vehicles using VHF & UHF radios painted up with warning signs. Perhaps antennas that raise the point of radiation higher above the vehicles would be a solution. Or --- is it really a problem in the first place?

From BOB (NC-006):

My article on building a beam for your scanner is tentatively slated to appear in the August issue of Popular Electronics. The beam works great for me, and should be a happy solution for many of our members who have been looking for a directional VHF/UHF antenna.

LOW BAND SKIP

Mark S. Lucas
Editor

Send reception reports relating to distant stations received in the 30-50 MHz band plus any Low Band DXing tips, comments or articles to: Mark S. Lucas, 724 E. Mulberry St., Lancaster, OH 43130.

A standardized reporting format should be used by members when submitting information. It should be like the following example:

39.46	KQA804	"FAIRFIELD CO."	SHERIFF		BASE	BC-250
6-6-79		2345 EDT	LANCASTER	OH	500	CA-OR-1223

The items are as follows: frequency, station call sign, station verbal I.D., type of service,base/mobile, listener's receiver model, date received, listener's local time (preferably 24 hour clock time), city or county of transmission origin, state of transmission origin using two letter postal abbreviations, approximate miles of transmission (using maps), listener's RCMA membership number.

Your use of this format will make for a very readable and useful column. But most of all...WE NEED YOUR LOGGINGS! SO, SEND THEM TODAY!!

Let's start with a tip on getting that cherished QSL card from CHP. "Out of state listeners who desire to make contact with CHP should address letters to: BOX 898, SACRAMENTO,CA 95804 COMMUNICATIONS SECTION.

"Unfortunately, CHP will not pass out any frequency info or code sheets...period! (It took about two months to receive a reply to my lengthy letter describing my February reception of CHP 42 MHz band bases and mobile units. CHP did state the letter was most interesting.)

"I did experience reception of CHP-Bakersfield base KAY-234 on 42.50 MHz at 1149 PST on 2-18-79 using a BC-101-which was more than two months before being reported as a frequency change in the May RCMA newsletter." (JOHN IL-12)

"I hope you or one of the other Ohio members will be able to provide detailed information on the Ohio State Patrol"(OSP). Well, such information is to be sent to Larry Smith,Ohio and Michigan's frequency and system editor. So how about it fellow Ohioans? Care to help?? You'll find his address elsewhere in the RCMA newsletter,and maybe you can help John's situation.

From MIKE (MO-002):

"A recent skip opening here produced an hour of unusually clear Canadian reception. This occured between 7 and 8 PM (CDT) on 10 May. I believe what I was listening to was the Ontario Province of Canada, monitored on 42.06 MHz. on a Regency ACT 10, with an old CB ground plane cut to 42 MHz. I did pick up a set of call letters which I think was XJB79 or XJV79, with base stations identified as "Ottawa", "Kingston", "Burlington", and "Niagara Falls", but with high level of signals received, I might have been receiving other stations about the country. Mobile units received were 9125, 9156, and 3124, and in giving addresses,the term "concession" popped up quite often. I would appreciate hearing from any member who can enlighten me on what I was listening to during this most interesting hour. Additionally, weather conditions were clear, a cold front was approaching from the west, and a heavy thunderstorm system was occuring from southwest to northest Missouri. My base is located in St. Charles County, in the St. Louis Metropolitan area.

Low Band Skip (continued)

From BRENT (CA-SB-016):

"Can anyone I.D. the following DX station?:

33.78 KGC 522(??) (No verbal I.D. heard) Fire/Amb Base BC-250
4-18-79 940 PST City/County (??) 3000 miles (?) CA-SB-016

"On same day (4-18-79) I also heard many "southern" accented transmissions from the EST zone (between 33 and 36 MHz.)

That is about it for this time. Now with the Sporadic-E(Es) now in the forefront, it's no problem what-so-ever for skip to be received by your location! So, let's see those loggings flood my mail box, and PLEASE remember the format. If you have other comments or some answers to other member queries,please separate them from the loggings. These editorships are not our full time jobs,and our full time jobs sometimes dictate spare time to a dire minimum. So your understanding and cooperation is certainly well appreciated.

Until the next time we meet....the best of 73 and good scanning!

MARKETPLACE

Members may advertise, free of charge, items wanted, items for sale and items for trade that are associated with the hobby of monitor radio listening above 30 MHz. No dealer ads accepted. Send to: RCMA, P.O. Box 4693, Riverside, CA 92514.

Editor's note: Larry Miller (OH-002) has volunteered for the "Marketplace" column. His name and address appeared in the June issue and his first column was to appear in the July issue. He has been on an extended vacation, perhaps longer then he figured since I have received nothing from him for the July issue. I hope he has not met with a misfortune. What appears below was what was sent to me which I had not forwarded to him. Until the certainty of Larry's editorship can be reestablished, please send "Marketplace" items to the above address. Also, all those whose ads did not appear, please resubmit them to the above address. IBR

FOR SALE: Panasonic RE-1800 programmable 8 channel scanner, LVHF, HVHF, UHF and UHF "T", like new - $150; Bearcat 4/6 handheld scanner, LVHF, HVHF, UHF, and UHF "T", including 4 nicad batteries, excellent condition - $125; J.I.L. SX-100 16 channel programmable scanner, covers 30-54, 140-179 and 410-513, ac/dc and built-in clock, $175. Contact TED ROYSTER (CA-SM-006), 3815 Susan Drive #A-6, San Bruno, CA 94066 (415-359-3986 evenings).

WANTED: Schematic or manual for Radio Shack PRO-10 VHF-UHF. Will purchase or borrow for XEROX copy & return. Also need mobile mounting bracket for same. DAVID BECK (AL-001), 422 Laurie Dr., Birmingham, AL 35214.

WANTED: Inexpensive aircraft band receiver. ERIC CHRISTENSEN, 2360 Brentford Rd., San Marino, CA 91108

FOR SALE: One month old Realistic PRO 21 VHF-Hi/UHF Pocket Scanner with telescoping and "Rubber Duckie" antennas, Ni-Cad batteries, AC adapter/charger, 12 VDC adapter/charger, and operation manual. $135. Cashiers Check or Money Order gets U.P.S. prepaid shipment. KIRK A. STOLT (IL-024), 1038 Augusta Ave., Elgin, IL 60120, (312)-741-4449.

Aircraft

Wayne Guerrini, Editor

Send private, commercial, firefighting and law enforcement aircraft frequencies of interest in the 108-136 MHz range and frequencies in other bands associated with airports and aircraft plus questions, articles, and tips related to aircraft monitoring to: P.O. Box 12434, Oklahoma City, OK 73157, (405)-943-2078. Please send all military aircraft frequencies and info to the "MILITARY" column.

The regular Aircraft column will not appear this month. Even though it was apparently mailed with sufficient time to arrive for inclusion in the Newsletter, it did not arrive. Please continue to send in questions and information relating to aircraft monitoring to the above address.

"AIRPORT/FACILITY DIRECTORY": This publication is without doubt the best aircraft frequency reference for the VHF aircraft band. It is published by the government and is offered for sale to the public. The U.S. is divided into seven regions and each region has its own volume. Each volume can be ordered by annual subscription (6 issues) or on a single issue basis (at least, it used to be available on a single issue basis, but a current short form catalog I have does not mention this). Write to: National Ocean Survey, Distribution Division C-44, Riverdale, MD 20840 and ask for a catalog offering the Airport/Facility Directory on a single issue and subscription basis.

THE editor's column (continued from page 7)

"Police Call Southern California Detail Edition"

In the last couple of months several members, mostly from states other than California, have inquired about a source of frequency information for Southern California and I have been suggesting the above publication and that members write to California Radio Communications Co., P.O. Box 35102, Los Angeles, CA 90035 (the address on the publication) and inquire about the price postpaid. I also wrote there so that I could gain this information in order to publish it and save people a lot of trouble in the future. Gene Hughes kindly responded saying that he did not play a part in the publication's distribution and that I should write Chick Ryel & Co., P.O. Box 762, Woodland Hills, CA 91364. I did so on June 18 and as of June 27 have heard nothing. Perhaps it is too soon to expect a reply. Anyway, those interested should write to Chick Ryel & Co. for the price postpaid. I'm certain that Gene passed on to this company all requests for info sent to him. If you do not receive or have not received a reply, please let me know.

From MICHAEL (IL-014): I would be willing to pay another increase in dues in order to expand the Newsletter, but I wonder if such an increase would discourage new membership. I remember when I joined RCMA a year ago, I had read about it in a magazine and felt that it might be worth $6.00 and I would take a chance. That $6.00 is the best $6.00 I ever spent - the Newsletter has been a goldmine of information, however, I am not so sure if I would have taken a "chance" if it had been $8.00 or $10.00. Although I favor another dues increase, I feel that it's side effects should be considered. --- One other comment - I have had no problems with the bulk rate delivery of my Newsletter. Even when we had 7 feet of snow here in Chicago, it came right on time!

THE editor's column (continued)

From DONALD (CO-002): As a new member of RCMA I agree with Tony (NJ-005) regarding bulk mailing. I have no problems receiving Newsletters.

(Editor's note: The Board unanimously agreed to continue using the "Bulk Rate" mailing of 8.4¢ instead of First Class postage for mailing of the Newsletter. No Bulk Rate complaint letters have yet been received by this editor and several members report no problems at all with deliveries. We can mail a Newsletter of up to approximately 76 pages with no increase in postage.)

From TONY (NJ-005): Yes, increase dues to $10.00 to allow for expansion of Newsletter.

From MARK (OH-001): I for one would not at all mind an increase in RCMA dues to compensate for the increase in Newsletter size. In fact $10 is quite reasonable in view of the fact that the average dues of most "Popular" clubs are about $10.

From L.P.B. (CA-SR-002): Reference your request for member's opinion on raising our dues to support an increased size Newsletter. I'm all for it!! Also RCMA Newsletter increases in value with each issue. The gains, as I look back, are fantastic!!! Thanks!!!

From FRED(CA-LA-168): Yes, by all means increase dues in order to keep up with complete expansion. And I like Harold's (OH-008) new RCMA insignia. (I like the original best but guess it's gone.)

(Editor's comments: So far all members responding are in favor of a dues increase if and when necessary. At this point there is no problem. We can probably print a 36 pager each month if new members and renewals keep coming in at the present rate. The influx of new members may taper off at some point in the future combined with greater input to the Newsletter. At that time dues would have to go up some. I'm trying to stay ahead of the game by being prepared to raise dues (with Board approval) when the time comes.)

"RCMA" Logo: Any members with preferences for a particular style for the "RCMA" lettering are asked to speak up. The lettering on the cover of this issue looks pretty good. What do you think? Remember, what is decided will be used on all RCMA printed matter in the future.

From EDWARD (IL-004): I would like to thank John Arendt (IL-012) for hosting the RCMA Illinois get-together at his house June 2, 1979. I would also like to thank his wife and child for getting "lost" for 9 hours (such devotion). I hope at our next get-together we can have some Wisconsin and Indiana attendees. Some of the Illinois people drove 100-150 miles to the meet. This is within range of parts of those two states.

I would encourage other areas to hold similar gatherings. There are enough members in the MA-PA-NY areas for a couple of groups.

How many RCMA Newsletters reach important people at Regency, Radio Shack, Bearcat, and others. Complimentary copies should be mailed to key people by name and title in the executive, sales, and engineering divisions.

(Editor's note: We have been doing this for perhaps 2 years and the manufacturers are indeed interested in our comments and viewpoints.)

If we want better gear, such as 800 MHz, and super sensitive low noise versions, we are going to have to make ourselves known as a group. We might consider questionnaires and membership surveys. These poeple don't know that expensive but good gear sells. They were surprised by the response to the synthesizer I'll bet!

NEW MEMBERS

AR-002 Don, Hot Springs 71901
AR-003 Russell, Little Rock 72211
CA-ED-001 Ben James Capehart, 2520 White Oak Dr., Rescue 95672
CA-LA-038 John L. Sands, 1800 N. Argyle Ave., Hollywood 90028
CA-LA-081 Richard L. Oschmann, 18044 Martha St., Encino 91316
CA-LA-088 Don, Sunland 91040
CA-LA-089 Robert E. Tashjian, 24100 Hamlin St., Canoga Park 91307
CA-LA-091 Joe S. Abdo, 13724 Gavina Ave., Sylmar 91342
CA-LA-093 Stephen, San Marino 91108
CA-LA-099 David T. Owens, 9940 Overest, Whittier 90605
CA-LA-105 Richard L. Holmes, 400 N. Kanan Rd., Malibu 90265
CA-LA-192 Richard, Baldwin Park 91706
CA-LA-193 Norman, Long Beach 90815
CA-LA-194 Bruce, Chatsworth 91311
CA-OR-054 Craig & Debbie Johnson, 9208 Bloomfield #87, Cypress 90630
CA-OR-115 Dennis D. Delph, 1855 East Rose Ave. #2D, Orange 92667
CA-OR-116 John Storch, 2706 North Linwood St., Santa Ana 92701
CA-OR-117 Jon Blantin, 378 South Tustin Ave., Orange 92666
CA-OR-118 Jack Waterman, P.O. Box 11887, Santa Ana 92711
CA-RI-008 Phil, Sunnymead 92388
CA-SC-006 Jeffrey S. Block, 114 No. 5th St., San Jose 95112
CA-SC-007 Alfred V. Pering, 11 Tevis Pl., Palo Alto 94301
CA-SF-004 Norman, San Francisco 94133
CA-SF-005 Gregory, San Francisco 94122
CA-ST-001 James A. Zuchelli, 719 16th St. Apt. B, Modesto 95354
CA-VE-008 Paul D. Drake, P.O. Box 6751, Camarillo 93034
FL-013 Donald LeFevre, P.O. Box 4340, Princeton 33032
FL-014 J. A. Gangnagel, Apt. C123, 2871 No. Ocean Blvd., Boca Raton 33431
GA-004 Mike McWilliams, 4503 Riverwood Forest Court, Decatur 30035
GA-005 C. Scott Textor, 1260 So. Cobb Dr. #37, Marrietta 30060
IL-026 Dennis R. Biagioli, 607 W. Pleasant Ave., Villa Park 60181
IL-027 James H. Lomelino, 300 Forest Ave. Lot 57, Springfield 62702
IL-028 Steven Macko, 357 E. Dewey, North Lake 60164
IL-029 Steve Genovese, 5644 No. Olcott, Chicago 60631
KY-002 William J. Petrowsky, 401A Laredo Court, Lexington 40502
LA-003 Tom Monteverde, 1558 Aviators Apt. D, New Orleans 70122
MA-011 Robert Coate, 23 Leicester Rd., Belmont 02178
MA-012 Harold E. Lane, Jr., 730 Concord St., Carlisle 01741
MA-013 David Tilbe, 14 Clark Ave., Easthampton 01027
MA-014 Jeffrey R. Cobb, 4 Charles St., Westborough 01581
MI-013 Chuck Reiniger, 21301 Telegraph #189, Southfield 48034
MI-014 David P. Liebler, RR #2, 5252 Rochester Rd., Dryden 48428
MN-004 Kenneth Koziol, Rt. 1, Box 226A, Maple Plain 55359
NJ-014 Gerald V. Simon, 25 Alyson Pl., Bloomfield 07003
NJ-015 Willard L. Woodley, 221 Carlton Ave., Piscataway 08854
NY-030 Mark A. Stone, 18 Deer Park Blvd., Deer Park 11729
NY-031 Alfred, Lancaster 14086
NY-032 Al Greenman, P.O. Box 301, Brooklyn 11204
NY-033 Arthur M. Schoenberger, 65 Cedar Dr., East Hills 11576
NY-034 Doug Winston, 17 Elizabeth Pl., Yonkers 10703
NY-035 David J. Schake, 5979 Barberry Ln., Macedon 14502
NY-036 Douglas, Brooklyn 11218
PA-017 Thomas P. Friend, 2421 Wrights Way, Pittsburgh 15203
PA-018 Tony Panasewicz, 820 E. 8th St., Chester 19013
PA-019 John H. Hart, 3608 Genesee Dr., Philadelphia 19154
PA-020 George P. Simpson, 6319 Salem Park Circle, Mechanicsburg 17055
PA-021 Gregory K. Smith, 834 Buchanan Ave., Lancaster 17603
PA-022 Richard D. Bender, 2281 Elm Hill Rd., Pittsburgh 15221
PA-023 Dennis E. Unger, 209 Parliament Dr., Coraopolis 15220
TX-002 Marvin H. Suggs, Jr., 1946 Carolina Ave., Port Arthur 77640
TX-007 Ferdinand F. Styra, P.O. Box 944, Yorktown 78164
VA-007 Donald H. Carrow, Jr., 828 Westminster Ln., Virginia Beach 23454
VA-008 Melvin S. Duggins, 1613 Wickham Ave., Newport News 23607
VA-009 Robert F. Bowman, 5841 Sierra Dr. N.W., Roanoke 24012
WA-002 Eric Vincent, 6454 Wing Point Rd. N.E., Bainbridge Island 98110
WI-007 Rueben G. Karau, P.O. Box 815, Kenosha 53141
WI-008 Robert Madson, 4300 So. 108th St., Franksville 53126
CAN-017 Michael, Ville de Quebec G1K 6V7
CAN-018 R.C. Jones, 369 Maywell Pl., Victoria, British Columbia V9C 1Z3

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RUSH -- ITEMS OF NEWS VALUE

The Radio Communications Monitoring Association is a radio club for persons interested in listening to two-way communications above 30 MHz as a hobby. RCMA was founded in May 1975 and is a Full Member of the Association of North American Radio Clubs (ANARC).